

APPENDIX

26. A process for making a semiconductor device having an improved contact to a conductive layer comprising the steps of:

providing a first layer of material and forming an opening therein, said opening including sidewalls;

forming a layer of a first conductive material on said first layer of material and along the surfaces of said sidewalls of said opening to form a localized thick region;

forming an overlayer of material on said layer of said first conductive material;

etching a contact hole in said overlayer and an overetch amount of said layer of said first conductive material [which communicates with said layer of said first conductive material], wherein said overetch amount is an amount necessary to account for variations in the thickness of said overlayer in [if] forming said first layer of material and said layer of said first conductive material; and

substantially filling said contact hole in said overlayer with a second conductive material which differs in composition from said first conductive layer and which contacts said first conductive material.

35. A process for making a semiconductor device having an improved contact to a conductive layer comprising:

providing a first layer of material and forming an opening therein, said opening including sidewalls;

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MIO 0012 V2

forming a layer of a first conductive material on said first layer of material and along the surfaces of said sidewalls of said opening to form a localized thick region, wherein said first conductive material forms spacers on said sidewalls;

forming an overlayer of material on said layer of said first conductive material;

forming a contact hole in said overlayer and in said localized thick region which communicates with said layer of said first conductive material, wherein said contact hole is etched in said overlayer and an overetch amount of said layer of said first conductive material, wherein said overetch amount is an amount necessary to account for variations in the thickness of said overlayer in forming said first layer of material and said layer of said first conductive material; and

substantially filling said contact hole in said overlayer with a second conductive material which differs in composition from said first conductive layer and which contacts at least said spacers.

48. [The] A process for making a semiconductor device [of claim 47] comprising:
forming a conductive layer having a first thickness over an underlayer;
forming a thick region of said conductive layer having a second thickness greater than said first thickness;
forming an overlayer over said conductive layer; and
forming a contact in said overlayer and in an overetch amount of said thick region,
wherein said contact is formed in said overetch amount of said thick region, wherein said overetch amount has a thickness greater than said first thickness.